

IN THE CLAIMS:

Please cancel claims 1-10 without prejudice.

Please add new claims 11 - 20 as follows:

11. (New) A bootstrap circuit for switching power supplies, comprising:
 - a first supply voltage coming from a first terminal;
 - a second supply voltage coming from a second terminal and a third terminal;
 - a first current path between the first terminal and the third terminal;
 - a second current path between the first terminal and the second terminal;
 - a third current path between the second terminal and the third terminal; and
 - a two-way voltage regulator placed along the second current path.
12. (New) The bootstrap circuit according to claim 11, wherein the two-way voltage regulator comprises a voltage limiting circuit supplied by the first supply voltage.
13. (New) The bootstrap circuit according to claim 11, wherein the two-way voltage regulator comprises a transistor having the drain coupled to the second terminal and the source coupled to the first and to the third terminal.
14. (New) The bootstrap circuit according to claim 13, wherein the two-way voltage regulator comprises a preset voltage generator coupled to the transistor gate.
15. (New) The bootstrap circuit according to claim 13, wherein the two-way voltage regulator comprises a capacitor coupled to the transistor gate.
16. (New) The bootstrap circuit according to claim 11, wherein the first current path comprises a resistance.
17. (New) The bootstrap circuit according to claim 11, wherein the first current path comprises a controlled switch.

18. (New) The bootstrap circuit according to claim 17, wherein the controlled switch is closed when the second supply voltage is lower than a preset reference voltage value and it is open when the second supply voltage is higher than the preset reference value.
19. (New) A switching power supply comprising:
a control circuit for the switching power supply; and
a bootstrap circuit of the control circuit, the bootstrap circuit comprising:
a first supply voltage coming from a first terminal;
a second supply voltage coming from a second terminal and a third terminal;
a first current path between the first terminal and the third terminal;
a second current path between the first terminal and the second terminal;
a third current path between the second terminal and the third terminal; and
a two-way voltage regulator placed along the second current path.
20. (New) An integrated circuit for a switching power supply, the integrated circuit comprising:
a control circuit for the switching power supply; and
a bootstrap circuit able to sustain a self supply voltage greater than 40 V, the bootstrap circuit comprising:
a first supply voltage coming from a first terminal;
a second supply voltage coming from a second terminal and a third terminal;
a first current path between the first terminal and the third terminal;
a second current path between the first terminal and the second terminal;
a third current path between the second terminal and the third terminal; and
a two-way voltage regulator placed along the second current path.